

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named
Inventor : Min Chu et al.

Appln. No. : 10/662,985

Filed : September 15, 2003

For : METHOD AND APPARATUS FOR
SPEECH SYNTHESIS WITHOUT
PROSODY MODIFICATION

Docket No.: M61.12-0565

Group Art Unit: 2641

Examiner:

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I HEREBY CERTIFY THAT THIS PAPER IS BEING
SENT BY U.S. MAIL, FIRST CLASS, TO THE
ASSISTANT COMMISSIONER FOR PATENTS, P.O.
BOX 1450, ALEXANDRIA, VA 22313-1450, THIS

9th DAY OF December, 20 04

Theresa Kelly
PATENT ATTORNEY

Sir:

The patents or publications listed on the enclosed PTO Form-1449 are submitted pursuant to 37 C.F.R. § 1.97. Copies of the patents or publications cited are enclosed.

TIME OF FILING

The information disclosure statement is being filed:

1. x with the application or within three months of the filing date of the application or date of entry into the national stage of an international application or before the mailing date of a first Office action on the merits, whichever event occurs last. In accordance with 37 C.F.R. § 1.97(b), no statement or fee is required.
2. _____ after the time period specified in paragraph 1 above, but before the mailing date of a final action under 37 C.F.R. § 1.113 or notice of allowance under 37 C.F.R. § 1.311. Therefore, in accordance with 37 C.F.R. § 1.97(c), submitted herewith is:

(check either A or B below)

- A. _____ a statement as specified in 37 C.F.R. § 1.97(e).

B. ____ the fee set forth in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under 37 C.F.R. § 1.97(c).

3. ____ after the mailing date of either a final action under 37 C.F.R. § 1.113 or a notice of allowance under 37 C.F.R. § 1.311, whichever occurs first, but before payment of the issue fee. Therefore, Applicant petitions for consideration and submits herewith:

- A. a statement as specified in 37 C.F.R. § 1.97(e);
- B. the petition fee set forth in 37 C.F.R. § 1.17(p).

STATEMENT

(only used if No. 2(A) or No. 3 above is checked)

The person(s) signing below certify

(check appropriate paragraph)

____ that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. § 1.97(e)(1).

OR

____ that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement. 37 C.F.R. § 1.97(e)(2).

METHOD OF PAYMENT

 x No fee is required.

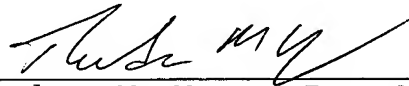
 Attached is a check in the amount of \$____.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,


WESTMAN, CHAMPLIN & KELLY, P.A.

By: _____



Theodore M. Magee, Reg. No. 39,758
Suite 1600 - International Centre
900 Second Avenue South
Minneapolis, Minnesota 55402-3319
Phone: (612) 334-3222
Fax: (612) 334-3312

TMM:sew

FORM PTO-1449	Atty. Docket No.: M61.12-0565	Appl. No.: 10/662,985
<p>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</p> 	First Named Inventor:	
	Min Chu et al.	
	Filing Date	Group Art:
	September 15, 2003	2641

U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
AA	5,146,405	09/1992	Church, Kenneth W.	704	9	
AB	5,905,972	05/1999	Huang et al.	704	268	
AC	6,230,131	05/2001	Kuhn et al.	704	266	
AD	6,751,592	06/2004	Shiga, Yoshinori	704	258	
AE	6,665,641	12/2003	Coorman et al.	704	260	
AF	6,064,960	05/2000	Bellegarda et al.			

FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
AG	EP 0 984 426	03/2000	EP			

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AH	Huang X et al., "Recent Improvements on Microsoft's Trainable Text-To-Speech System-Whistler," Acoustics, Speech and Signal Processing, 1997, pp. 959-962
AI	Hunt A et al., "Unit Selection in a Concatenative Speech Synthesis System Using a Large Speech Database," IEEE International Conference on Acoustics, Speech and Signal Processing, 1996, pp. 373-376
AJ	Tien Ying Fung et al., "Concatenating Syllables for Response Generation in Spoken Language Applications," IEEE International Conference on Acoustics, Speech and Signal Processing, 2000, pp. 933-936
AK	Fu-Chiang Chou et al., "A Chinese Text-To-Speech System Based on Part-of-Speech Analysis, Prosodic Modeling and Non-Uniform Units," Acoustics, Speech, and Signal Processing, 1997, pp. 923-926
AL	Bigorgne D. et al., "Multilingual PSOLA Text-To-Speech System," Statistical Signal and Array Processing, Proceedings of the International Conference on Acoustics, Speech, and Signal Processing, 1993, pp. 187-190
AM	Nakajima S et al., "Automatic Generation of Synthesis Units Based on Context Oriented Clustering," International Conference on Acoustics, Speech and Signal Processing, 1988, pp. 659-662
AN	Black A W et al. "Optimising Selection of Units from Speech Databases for Concatenative Synthesis," 4 th European Conference on Speech Communication and Technology Eurospeech, 1995, pp. 581-584
AO	Copy of European Search Report Application Number: EP 01 12 8765

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449	Atty. Docket No.: M61.12-0565	Appl. No.: 10/662,985
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	First Named Inventor:	
	Min Chu et al.	
	Filing Date	Group Art:
	September 15, 2003	2641

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AP	P.B. Mareuil and B. Soulage, "Input/output normalization and linguistic analysis for a multilingual text-to-speech Synthesis System," Proc. of 4 th ISCA workshop on speech synthesis, Scotland, 2001.
AQ	http://www.research.att.com/projects/tts/ .
AR	D.H. Klatt, "The Klattalk text-to-speech conversion system," Proc. of ICASSP '82, pp. 1589-1592, 1982.
AS	H. Fujisaki, K. Hirose, N. Takahashi and H. Morikawa, "Acoustic characteristics and the underlying rules of intonation of the common Japanese used by radio and TV announcers," Proc. of ICASSP '86, pp. 2039-2042, 1986.
AT	K.N. Ross and M. Ostendorf, "A dynamical system model for generating fundamental frequency for speech synthesis," IEEE transactions on speech and audio processing, Vol. 7, No. 3, pp. 295-309, 1999.
AU	J.R. Bellegarda, K. Silverman, K. Lenzo, and V. Anderson, "Statistical prosodic modeling: from corpus design to parameter estimation," IEEE transactions on speech and audio processing, Vol. 9, No. 1, pp. 52-66, 2001.
AV	S. Chen, S. Hwang and Y. Wang, "An RNN-based prosodic information synthesizer for Mandarin text-to-speech," IEEE transactions on speech and audio processing, Vol. 6, No. 3, pp. 226-239, 1998.
AW	M. Chu, H. Peng, H. Yang and E. Chang, "Selecting non-uniform units from a very large corpus for concatenative speech synthesizer," Proc. of ICASSP '2001, Salt Lake City, 2001.
AX	E. Moulines and F. Charpentier, "Pitch-Synchronous Waveform Processing Techniques for Text-to-Speech Synthesis Using Diphones," Speech Communication Vol. 9, pp. 453-467, 1990.
AY	Y. Stylianou, T. Dutoit, and J. Schroeter, "Diphone concatenation using a harmonic plus noise model of speech," Proc. Of Eurospeech '97, pp. 613-616, Rhodes, 1997.
AZ	M. Chu, H. Peng, H. Yang and E. Chang, "Selecting non-uniform units from a very large corpus for concatenative speech synthesizer," Proc. of ICASSP '2001, Salt Lake City, 2001.
BA	X.D. Huang, A. Acero, J. Adcock, et al., "Whistler: a trainable text-to-speech system," Proc. of 'ICSLP '96, Philadelphia, 1996.
BB	R.E. Donovan and E.M. Eide, "The IBM trainable speech synthesis system," Proc. of ICSLP '98, Sidney, 1998.
BC	H. Peng, Y. Zhao and M. Chu, "Perpetually optimizing the cost function for unit selection in a TTS system with one single run of MOS evaluation," Proc. of ICSLP '2002, Denver, 2002.
BD	M. Chu and H. Peng, "An objective measure for estimating MOS of synthesized speech," Proc. of Eurospeech '2001, Aalborg, 2001.
BE	http://www.microsoft.com/speech/techinfo/compliance/

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449	Atty. Docket No.: M61.12-0565	Appl. No.: 10/662,985
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	First Named Inventor:	
	Min Chu et al.	
	Filing Date	Group Art:
	September 15, 2003	2641

U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
BF	6,708,152	03/2004	Kivimaki, Mika	704	260	
BG	5,890,117	03/1999	Silverman	704	260	
BH	5,384,893	1/1995	Hutchins, Sandra E.	704	267	
BI	2002/0103648	8/2002	Case et al.	704	260	
BJ	6,076,060	6/2000	Lin et al.	704	260	
BK	2002/0152073	10/2002	DeMoortel et al.	704	260	
BL	2002/0072908	06/2002	Case et al.	704	260	
BM	5,732,395	03/1998	Alexander Silverman	704	260	
BN	5,839,105	11/1998	Ostendorf et al.	704	256	
BO	6,401,060	06/2002	Critchlow et al.	704	1	
BP	6,185,533	02/2001	Holm et al.	704	267	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

BQ	Wang, et al. "Tree-Based Unit Selection for English Speech Synthesis," ICASSP'93, Vol. 2, pp. 191-194 (1993).
BR	Huang, X., Luo, Z. and Tang, J., "A Quick Method for Chinese Word Segmentation," Intelligent Processing Systems, Vol. 2, pp. 1773-1776 (1997).
BS	Wong, P. and Chan, C., "Chinese Word Segmentation Based on Maximum Matching and Word Binding Force," COLING'96, Copenhagen (1996).
BT	Wang, W.J., Campbell, W.N., Iwahashi, N. and Sagisaka, Y., "Tree-Based Unit Selection for English Speech Synthesis," ICASSP'93, Vol. 2, pp. 191-194 (1993).
BU	Hon, H., Acero, A., Huang, S., Liu, J. and Plumpe, M., "Automated Generation of Synthesis Units for Trainable Text-to-Speech Systems," ICASSP'98, Vol. 1, pp. 293-296 (1998).
BV	Black, A. and Campbell, N., "Unit Selection in a Concatentative Speech Synthesis System Using a Large Speech Database," ICASSP'96, pp. 373-376 (1996).
BW	Chu, M., Tang, D., Si, H., Tian, Z. and Lu, S., "Research on Perception of Juncture Between Syllables in Chinese," Chinese Journal of Acoustics, Vol. 17, No. 2, pp. 143-152.

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.